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DENDROBIUM NOBILE

## FLOWERS OF THE AIR

BY LENNIE GREENLEE

*Illustrated from photographs of natural flowers by Pitcher and Manda.*

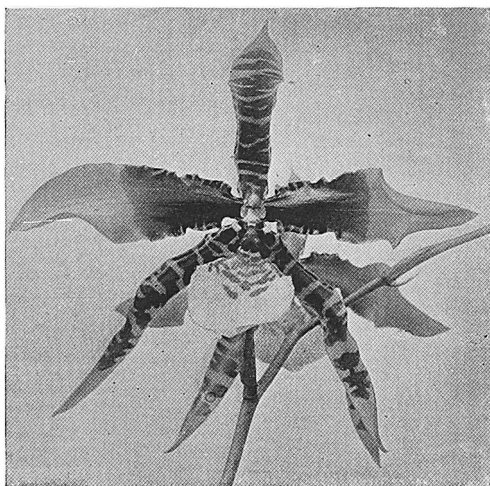
SOMETHING of wonder and mystery is ever attached to the orchid, whether it be a white odontoglossum, spreading its glossy sprays amid an aristocratic collection in a great conservatory, or a shy, rosy calypso, happy in the green twilight of deep woods.

In addition to their beauty, the odd growth of the plants, the cost and rarity of choice varieties, the risks run by collectors to obtain them, the strange stories of the far-off climes from which they come, all are potent in the spell of enchantment folded within their petals and breathed out in their rich, spicy perfume.

None of the tropical spoils yet captured for temperate zones have proved such a pure source of pleasure to lovers of rare flowers, or contributed to the science and literature of botany so priceless a chapter as have the orchids. Their

high-bred air, curious, jewel-like flowers, and strangely bright and blended colors, have given them the name of "royal flowers" among many of their admirers; while others, studying more deeply their complex structure and meaning, have called them "spiritual flowers." A drooping or floating spray of white cœlogyne, with pure, transparent petals, like tremulous folded wings, is in itself sufficient to justify the latter name.

Orchids are among the most diverse of all plants, showing almost every conceivable variation in form, color, and marking of the flowers, and in habit and habitat. The flowers owe half their charm to their fanciful ir-



THE BABY ORCHID: ODONTOGLOSSUM GRANDE

regularity. The curious shapes assumed by many resemble different forms of animal life so much that we have a number of popular names for them, such as "dove orchid," "baby orchid," "butterfly orchid," etc.

For botanists the chief interest of an orchid lies in its wonderful structure with regard to fertilization. It required Mr. Darwin's volume of five hundred pages upon "the various contrivances by which orchids are fertilized by insects," to explain how the flowers are provided with means to prevent their being fertilized with their own pollen, and how their channels, curtains, trap-doors and bridges guide insects dusted with pollen from other flowers of the same species straight past an

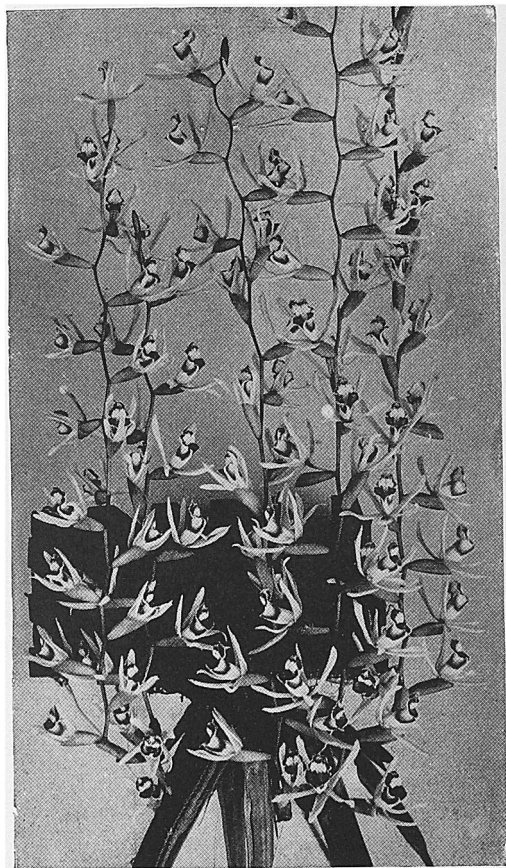


THE IVORY ORCHID: *ANGRÆCUM SESQUIPEDALE*

adhesive stigma, waiting to capture it, on their way to the coveted honey-cells in the heart of the blossom.

The leaves and roots of orchids are also peculiarly interesting. The former are usually thick and stiff, with smooth margins and a shining surface. At their base, above the soil, green, bulb-like bodies frequently grow so thickly that the whole top of the pot or basket is covered with them. These are called pseudo-bulbs, or false bulbs. The real roots are not always bulb-like, but so many of them are that the family's name is derived from that fact. Among air-growing orchids it causes astonishment to novices to follow a long, glittering, pendant spray of flowers up its stem, and find the roots bare, excepting a morsel of moss wrapped round them, growing upon a dry block.

The two great branches of the orchid "family-tree" are the epiphytes, "flowers of the air," and the terrestrial orchids, a class "none too bright or good" to draw its sustenance directly from the earth. The former live like bright-plumaged birds among the tree-tops of tropical forests, while many of the latter are native to temperate and cold climates.



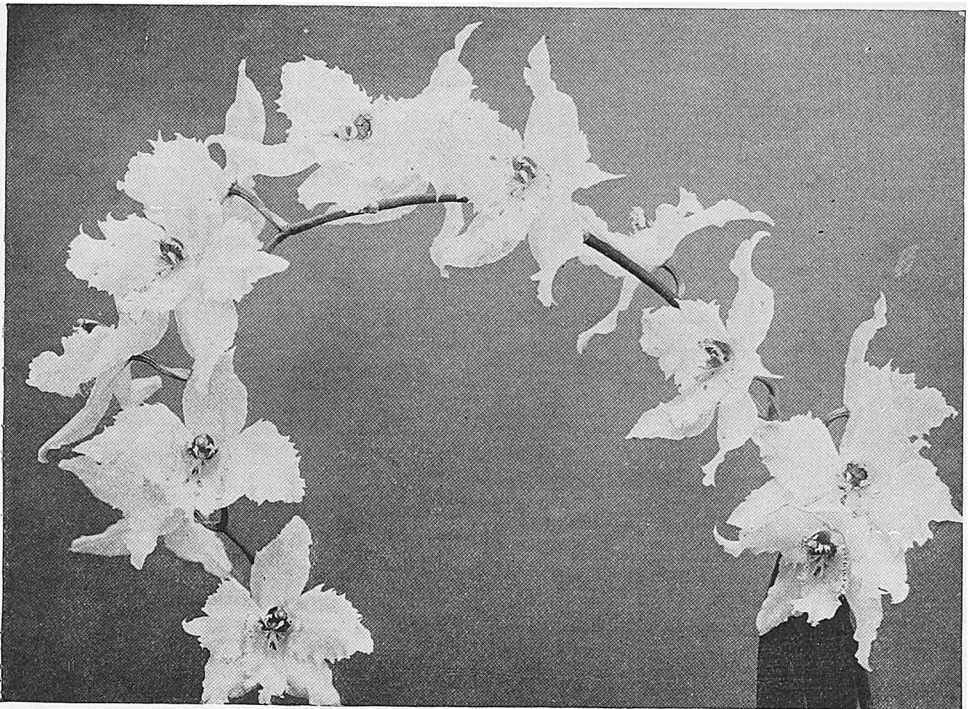
THE LADDER ORCHID: *CŒLOGYNE DAYANA*



THE OWL ORCHID: ZYGOPETALUM MACKAYI

It is to the epiphytes, then, that the greater part of the family-tree belongs, since they grow upon it in such large families as to completely cover it sometimes. Although they cling close to the bark with their stout roots, most of their sustenance is derived from the warm, moist air. A "windfall" in the tropics may thus mean to the collector of orchids a fortune in the bulbs of some rare species dislodged from their lofty perch, or still clinging to the prostrate branches.

All the brightness of these dense forests is near the sky—the glint of gorgeous birds and flowers, the warm, languorous perfumes, the hum of bees and the chatter of monkeys. Down below, in the gloom of the dim aisles of massive trunks, where dark shapes of sharp-eyed and sharp-toothed carnivora lurk, the silence is broken and the dusk is brightened only by an occasional lilt of a bird's song, falling flower-petals,



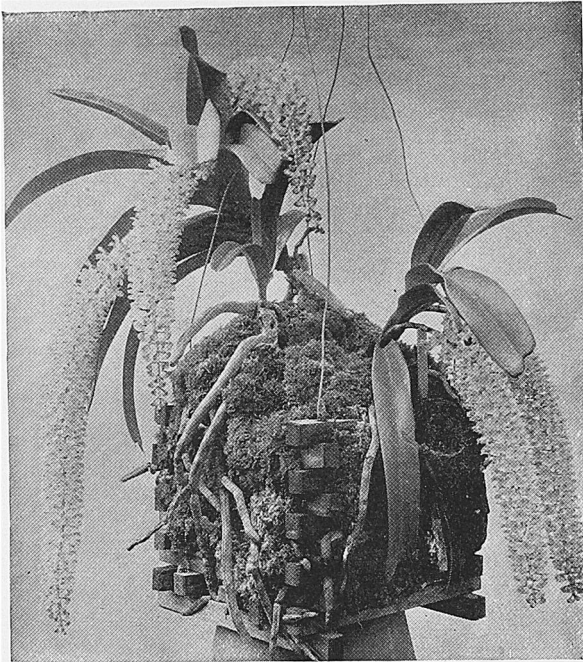
ODONTOGLOSSUM CRISPUM

and now and then a kindly ray of sunshine.

Some idea of the beauty with which orchids clothe their native forest may be had from the notes of a collector along the Amazon. The canoe had turned from the river into the quiet waters of an igarape, the oarsmen seeking a camping-place for the night. "On our right the boughs of trees drooping to the water's edge were laden with thousands of brassavolas all in full bloom. Some of the masses were many feet in diameter, and the long pseudo-bulbs hid all the forest-growth. The branches were white with the delicate sprays of countless spotless flowers, and the air heavy with their rich fragrance. On the other bank of the stream some accident had killed the trees, and clinging close to every inch of surface on the branches



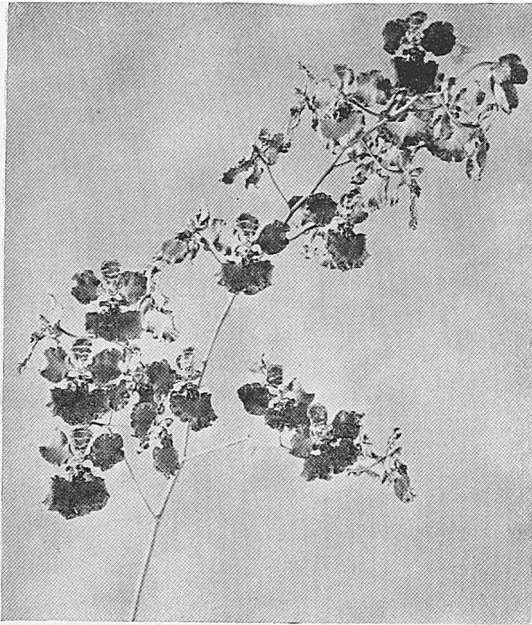
*LÆLIA ANCEPS*



A POUCH-LIPPED ORCHID: *SACCOLABIUM PRÆMORSUM*

and trunks were small bromeliads, their rich scarlet bracts out-dazzling the sunshine. As far as the eye could reach this brave contrast was presented; on one side the soft, snowy cloud of fringed brassavolas, on the other the gleaming scarlet bromeliads. There was no intermingling—not a gleam of scarlet on one bank, not a flake of white on the other." A collection of orchids cannot be procured, like a stock of bedding-plants, from seeds, cuttings or division; these processes, though fascinating and much practiced, are far too slow to satisfy the present demand. The only practical way to secure "orchids for the million" is to send collectors into tropical forests, where great





ONCIDIUM GARDNERI

with the purple deepened on the lip; yet, estimating the value of the two grossly in ducats and dollars, plants of the former sell for a dollar apiece, while five hundred dollars or more would cheerfully be paid for the latter by a collector.

Blue is one of the rarest colors in orchids, and *Vanda cœrulea*, with large flowers of clear sky-blue, upon spikes a foot or more long, is another general favorite. The dendrobiums, too, are remarkable for the velvety, eye-like spots which give their dainty sprays of flowers the same knowing human look so marked in the face of the pansy. Perhaps the very oddest of all orchids in form is *Angræcum sesquipedale*, with long-spurred, thick, stiff, white flowers, that look as if carved from ivory. The odontoglossums are all noted for the exceeding grace and beauty of their long curving sprays.

aerial gardens of them have been forming for centuries, to bring the plants home alive. By far the greater number of plants in cultivation are direct importations, and it is more than probable that the rich flowers which decorated your dinner-table yesterday were cut from cattleyas that once grew in Colombia, vandas from the Khassian hills, or odontoglossums from the slopes of the Andes.

A great favorite with buyers of cut orchids is *Cattleya Trianae*, with wide sepals and petals of rosy mauve, an orange-yellow disk and a velvety purple lip. To the uninitiated this gayly colored variety would probably seem more attractive than the same form of flower having petals of pure white,

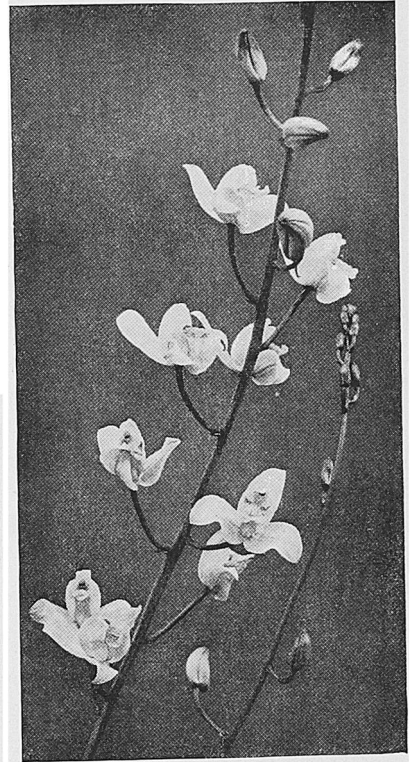


DENDROBIUM THYRSIFLORUM



A BUNCH OF MILTONIAS

Fifty or sixty years ago there were but few fine collections of orchids, and the best varieties were practically unknown except to students of botany. Now of the five thousand or more species accredited to the family more than two thousand are in cultivation, with varieties and subvarieties so continually multiplied by



VANDA AMESIANA



DENDROBIUM WARDIANUM

hybridizing and the discoveries of collectors that the record of them becomes baffling. Some sorts are still valued far above rubies; others, once as precious, are now displayed in every florist's window, and are beginning to be cultivated in private houses, since these "flowers of the air" thrive easily under intelligent culture.